DOCUMENT RESUME

ED 109 121 SP 009 374

AUTHOR Eggert, Wallace V.; Moore, John N.
TITLE The Development of a Procedure to Encourage Certain Facilitative Behaviors of Classroom Teachers.
PUB DATE Feb 73
NOTE 36p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, February, 1973)

EDRS PRICE MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS Classroom Communication; Classroom Observation Techniques; *Student Teacher Relationship; *Teacher Behavior; *Teacher Improvement; *Teacher Influence; Video Tape Recordings

ABSTRACT

The main purpose of this study was to develop a procedure whereby teachers might improve their interpersonal transactions with students. Concomitant purposes were to develop a limited category coding system for easy use by classroom teachers and to develop a classroom observation system for research purposes. Sixteen teachers (three primary, nine intermediate, and four junior/secondary) were provided with a training manual designed to teach the user to discriminate coding categories, to code teacher responses, and to interpret response profiles. Subjects were later asked to videotape and code their classroom interactions. Trained raters provided ratings on eleven sets of pre- and post-tapes for data analysis. Important findings of the study were as follows: (a) scales developed for the measurement of accurate empathy, warmth, and genuineness have demonstrated high reliability when used in a variety of classroom contexts, (b) structured feedback using videotape has proven to be an effective way to change certain facilitative behaviors of classroom teachers, and (c) the size of the student group does not appear to effect measurement or gain. (Authors/JA)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED109121

THE DEVELOPMENT OF A PROCEDURE TO ENCOURAGE CERTAIN FACILITATIVE BEHAVIORS OF CLASSROOM TEACHERS

WALLACE V. EGGERT
JOHN N. MOORE

SIMON FRASER UNIVERSITY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A.E.R.A., - New Orleans, February, 1973

SP009 374

Introduction

Teaching has been described as "a form of interpersonal influence aimed at changing the behavior potential of another person (Gage, 1963). Amidon and Hunter (1963) describe teaching as an interactive process, involving classroom talk between teacher and pupils. Stolurow and Pahel (1963) state that "...teaching is fundamentally a social process involving communication and interaction between at least two people, a teacher and a student." It is commonly conceded that the teacher is the most important variable in the classroom. The relationships between teacher and students must also be an important factor.

The need for research into teacher-pupil relationships is evident if one is concerned with improving teaching. But what characterizes effective human relationships? And by what means are classroom teachers encouraged to improve in their interpersonal skills?

This study sought answers to several questions. Will the scales used for measurement of accurate empathy, warmth and genuineness be adaptable for easy use by teachers? Will the adapted scales demonstrate high reliability when used in a variety of classroom contexts? And will the technique of focused video tape feedback effect significant changes in the level of accurate empathy, warmth and genuineness offered by classroom teachers?

Hypotheses and Predictions

Specific hypotheses related to the latter question may be stated as follows:

There will be no statistically significant difference between pre and post mean ratings for:

H_{OA} Combined scores (accurate empathy, warmth, and genuineness).

H_{OB} Accurate empathy.

H_{OC} Warmth.

H_{OD} Genuineness.

In accord with the purpose of this study the following prediction was made relative to the hypotheses.

The focussed video feedback will have an effect on verbal behavior of classroom teachers. It is therefore predicted that the post tape mean ratings for combined scores (accurate empathy, warmth, and genuineness) and for scores taken separately, will be greater than the pre tape mean ratings.

Definition of Terms

For the purposes of this study the following terms were defined.

Focused video tape feedback - Watching one's own video tape interaction with students and coding responses for accurate empathy, respect and genuineness.

Coding - Categorizing each response on the basis of definitions and examples in the training manual.

Interpersonal skills - For purposes of this study the skills refer to accurate empathy, warmth, and genuineness.

1. Accurate Empathy - is a score derived from ratings using the Truax scales 1971.

2. Warmth - is a score derived from ratings using the Truax scales 1971.

3. Genuineness - is a score derived from ratings using the Truax scales 1971.

NOTE: The following are definitions of these interpersonal skills as they appear in the training manual.

1. Accurate empathy - Involves more than just being able to know what your students mean. It involves more than just being sensitive to your student's current feelings and beliefs. Accurate empathy also involves communicating your understanding and sensitivity to the student in terms that he can understand and know that you are with him.

At high levels of accurate empathy the message "I am with you," is unmistakably clear. Your responses will fit perfectly with the student's ideas and feelings. Your responses will be additive in that they will serve to clarify and expand the student's exploration of his ideas, opinions or feelings.

At low levels of accurate empathy your lack of awareness, your lack of understanding is unmistakably clear. Your responses will be subtractive in that they do not attend to the student's ideas, expressions or feelings.

2. Respect - Can be operationally defined in terms of accepting the student, his opinions, feelings and potentials. It involves a nonpossessive caring for him as a separate person.

At high levels respect involves trusting, prizing, valuing and caring deeply for the student. It involves a conditional attitude on your part in that you indicate a willingness to employ all your resources for producing and creating his highest and his best.

3. Genuineness - Being genuine or being yourself, simply means being congruent, i.e., what you say is in agreement or is harmonious with the way you feel.

At high levels of genuineness you will be able to be freely and spontaneiously yourself, not necessarily expressing all your feelings but certainly not denying them.

At low levels of genuineness you will be defensive and phony. You will be presenting a facade and playing the professional role.

Limitations

This study meets two conditions often called for by educators, namely, it is set in the classroom, and the subjects are practising teachers.

These field conditions, however, imposed certain limitations. The equipment available restricted the size of the sample. The study will, therefore, have limited generalizability. The time of the school year limited the treatment period. The length of treatment necessary to effect and sustain behavior change will not be determined. Concentration of the study in one school limited control of classroom context (grade level and subject matter).

Assumptions

Since the early 1960's extensive research has been done relating therapist interpersonal skills to client process and outcome variables. The studies suggest that therapists and counselors who are accurately empathic, nonpossessively warm, and genuine are effective. Patients seen by them generally improve. And patients seen by therapists who rate low in these conditions, are generally among the "cases" which do not improve. These studies have been reviewed and summarized in Truax and Carkhuff (1967) and Truax and Mitchell (1971).

Although their findings relate primarily to the therapeutic context and relationship, researchers have repeatedly speculated that similar effects concerning accurate empathy, warmth and genuineness would be found in "any kind of context" and "any class of relationsip" (Rogers 1961).

Five studies (Truax and Tatum, 1966; Christensen, 1960; Aspy, 1965; Aspy and Hadlock, 1966; and Aspy and Roebuck, 1972) carried out in the classroom context, suggest that certain teacher facilitative behaviors may be related to pupil achievement. However, each study used different experimental means to determine teacher accurate empathy, warmth, and genuineness. Inter-investigation reliability, therefore, remains uncertain, even though high degrees of inter-rater reliabilities were obtained.

From a review by Rosenshine (1971) emerges evidence supportive of Rogers' hypothesis. To summarize; the teacher behaviours most closely related to pupil achievement are teacher approval and disapproval. The

strongest type of approval was labeled "use of pupil ideas," and the strongest type of disapproval was labeled "teacher criticism" (Rosenshine, 1971). These behaviors are related to the meanings of accurate empathy and warmth. The evidence presented by Rosenshine supports the hypothesis that these interpersonal skills are central to effective teacher-pupil relationships. These findings are also consistent with much of the research done using behavior modification techniques (Ulrich, et. al., 1966). There appears, therefore, to be converging research evidence from studies using rating scales for the measurement of interpersonal skills, from studies using systematic classroom observation, and from studies using operant conditioning techniques. Investigators from each of these areas of research have noted that approval is usually associated with higher pupil achievement (Rosenshine, 1971).

Focused Video Tape Feedback

Recently, a system for professional development called Guided Self-Analysis (GSA) was designed "to assist practicing classroom teachers in their own efforts toward professional self-improvement" (Parsons, 1968). GSA has proven to be an effective instrument for classroom interaction analysis and for modifying teaching behavior. Birch (1969) describes the system as utilizing "sequential codes each containing a limited number of operationally defined categories. The relatively untrained observer can focus specifically and intensively on only three to five critical categories at a time and still develop a cumulative profile of teaching behavior. Energy and interest are directed into

self-analysis and behavior modification rather than being dissipated in training and practice.

A study conducted by Birch (1969) was designed to identify the treatment effects of specific elements or factors in the GSA procedure, on the verbal behaviors of pre-service teachers. The major factors examined were:

The findings are summarized as follows:

1. Self-coding has an effect on the verbal teaching behavior of pre-service teachers, particularly their questioning strategies and response patterns.

2. Self-coding was effective in decreasing rhetorical questions, questions calling for facts, closure responses and giving instructions.

NOTE: These behaviors would likely result in low ratings on empathy and warmth scales.

3. Self-coding was effective in increasing leading and probing questions, and extending responses.

NOTE: These behaviours would likely result in middle to high ratings on empathy and warmth scales.

4. "No factor other than self-coding, and no identificable interaction of factors was shown to have an effect on the verbal teaching behavior of pre-service teachers" (Birch, 1969), that is, only those students who had the full GSA treatment, modified their teaching behavior significantly.

The findings related to the effectiveness of the GSA treatment, emphasize the importance and power of focused video feedback as a means of modifying the verbal behavior of pre-service and practising teachers. The GSA system for professional development has served as a model in the development of the procedures under study.

Procedures

Sixteen teachers (three primary, nine intermediate and four junior secondary) volunteered to participate in the program. The experimental treatment consisted of several treatment elements: the training manual; learning to discriminate levels of accurate empathy, respect, and genuineness; practice in coding using training tapes; video tape feedback; and the focused video tape feedback.

The Training Manual

The manual developed - A Way of Looking at What I Am Doing (see Appendix A) was designed to serve as a guide for classroom teachers attempting to modify their interpersonal transactions with students.

The introduction to the manual gives a brief rationale and an explanation of what is involved for program participants.

> Our interpersonal transactions with students are a major contributing factor in students developing positive and/or negative attitudes toward learning. Granted there are many other influencing factors, but let's get at one we can do something about.

There is extensive evidence which indicates that there are at least three conditions central to any "effective" human interaction. They are genuineness, respect, and accurate empathy. A teacher who is effective in his or her interpersonal transaction is one who is authentic, genuine or congruent, that is, he is able to be himself without being defensive or phony. He is also able to provide a secure trusting relationship by his accepting, allowing, caring, valuing, or respecting his student's ideas, feelings, and potentials. And he is also able to understand and "be with" his students. He is able not only to understand or be empathic but he is able to communicate accurately to his students that he does understand.
..... This program has been designed to assist you, the practicing teacher, not only look at what you are doing in your interpersonal transactions with others, but to provide you with alternative ways of responding to students.

What is involved?

First by understanding what follows in this coding schedule you will be learning to discriminate and categorize responses in terms of levels of accurate empathy, respect and genuineness.

Second having learning to discriminate, you will be ready to analyze a video tape of your own classroom interactions and with the date you collected come to a more objective understanding of your own teaching behavior.

In short by structuring your perception of your interaction with students, i.e., by asking you to code your responses you will be able to answer the first question, "How well am I doing?" in my interpersonal interactions. Then by the very process of learning to discriminate and code your responses you will be exposed to alternative ways of responding to your students. This is how you can improve.

The introduction to the manual is followed by a series of tasks as follows:

TASK ONE - Learning to Discriminate Accurate Empathy

A general definition of accurate empathy is given followed by descriptions,

examples and explanations of specific verbal behaviors to be coded at five different levels. For example:

LEVEL 1

Description: My response did not attend to what the student just said not to how the student was obviously feeling. The effect was subtractive.

Example: T - Bill, why haven't you got this done?

P - (Pause) I don't know. Right now things are so bad that I don't know...what's the point?

T - Look, don't give me that -- why haven't you got this done? You've got to get down to this and do some work if you want to get through.

Explanation: My response indicated a lack of awareness of the student's most obvious expressed ideas or feelings. It may have been that I was inattentive, not interested or bored. Or it may have been because I was operating from a preconceived frame of reference which excluded the student, i.e., I was not in his space. I was closing out or taking away from further inquiry or exploration by the student.

TASK TWO - Learning to Discriminate Respect

As in Task One, general definition, descriptions, examples and explanations are given for four different levels of respect.

TASK THREE - Learning to Discriminate Genuineness

As in Task One, general definition, descriptions, examples and explanations are given for four different levels of genuineness. See Figure 1, p. 12 for Summary of Key Operational Words...

The levels appearing in the training manual were developed after careful examination of rating scales for the measurement of accurate empathy, nonpossessive warmth, (Truax) or respect (Carkhuff), and genuineness. An attempt was made to change the nine, and five point rating scales, from ordinal scales to nominal categories. The rational for this change was to develop an objective reliable observational system which did not require "rating" but counted the frequencies of specified teacher behaviors. There are advantages to a system using a small number of nominal categories over a system using rating scales. First, self coding, involving counting frequencies, is likely to be more reliable than self rating. Second, teachers are more likely to respond to a program which asks them to categorize their behaviors as opposed to being asked to rate themselves. And third, the time required to train teachers to use a coding system, with only four or five categories, is minimal.

TASK FOUR - Coding Your Own Video Tape and Calculating Your Response Profile

The teacher analyzes the video tape made in his classroom using the frequency chart, (see Figure 2) then calculates average response level for each skill. (see Figure 3)

TASK FIVE - Interpreting Your Response Profile

The intention of Task Five is to allow the teacher to make inferences about student learning and attitudial consequences of his recently observed teaching behavior. The teacher is also asked to list specific changes he would like to make in his interpersonal transactions with students.

FIGURE 1

A BRIEF SUMMARY OF KEY OPERATIONAL WORDS
CHARACTERIZING THE LEVELS OF
ACCURATE EMPATHY, RESPECT AND GENUINENESS

LEVEL	ACCURATE EMPATHY	RESPECT	GENUINENESS
1	Subtractive (No awareness of ing and feeling, inattentive, uninterested or bored)	Rejecting	Phony or defensive (temper, bragging)
2	Subtractive (Awareness of only obvious meaning and feeling but tangential response, distorted meaning, drained off a level of affect)	Mechanical or passive, possessive caring	Anonymous intellectualizing, uninvolved
3	Interchangeable	Accepting, allowing, prizing, valuing Giving my best	Congruent Not phony or defensive
4	Additive (probing)	After level 3 respecting conditionally Expecting, pressing for the student's best	Free and completely congruent
5	Additive (focussing on personally relevant material)		

CODING SHEET

SITUATION: _____ DATE: _____ AVERAGE RESPONSE LEVEL: [ ]

CODING FOR

	Code Level	RESPONSES
	1	
	2	
	3	
	4	
	5	

1	
2	
3	
4	
5	

1	
2	
3	
4	
5	

LEVEL TOTALS

1	
2	
3	
4	
5	

TOTAL NO. OF RESPONSES [ ]

FIGURE 3

CALCULATING YOUR RESPONSE PROFILE

Multiply the code level by the number of responses coded at that level then divided by the total number of responses.

1. ACCURATE EMPATHY

CODE LEVEL		LEVEL TOTALS		
1	×	_____	=	_____
2	×	_____	=	_____
3	×	_____	=	_____
4	×	_____	=	_____
5	×	_____	=	_____
			TOTAL	_____

TOTAL ÷ TOTAL NO. OF RESPONSES = AVERAGE RESPONSE LEVEL FOR ACCURATE EMPATHY

_____ ÷ _____ = _____

1. RESPECT

CODE LEVEL		LEVEL TOTALS		
1	×	_____	=	_____
2	×	_____	=	_____
3	×	_____	=	_____
4	×	_____	=	_____
			TOTAL	_____

TOTAL ÷ TOTAL NO. OF RESPONSES = AVERAGE RESPONSE LEVEL FOR RESPECT

_____ ÷ _____ = _____

3. GENUINENESS

CODE LEVEL		LEVEL TOTALS		
1	×	_____	=	_____
2	×	_____	=	_____
3	×	_____	=	_____
4	×	_____	=	_____
			TOTAL	_____

TOTAL ÷ TOTAL NO. OF RESPONSES = AVERAGE RESPONSE LEVEL FOR GENUINENESS

_____ ÷ _____ = _____

Estimating Reliability

Inter-rater reliability was calculated using Ebel's formula for intra-class correlation and was found to be .80 for accurate empathy, .74 for warmth, and .81 for genuineness. (see Tables 1, 2 and 3).

TABLE 1

ESTIMATED RELIABILITY OF RATINGS

FOR ACCURATE EMPATHY

Source	Sum of Squares	Degrees of Freedom	Variance
From persons (Vp)	13.51	23	.587
From raters	.76	2	
From remainder (Ve)	5.44	46	.118
Total	19.71	71	

$$r_{kk} = \frac{V_p - V_e}{V_p}$$

$$r_{33} = \frac{.587 - .118}{.587}$$

$$r_{33} = .80^{1}$$

1. Ebel's coefficient of reliability for mean ratings of accurate empathy from three raters.

TABLE 2

ESTLIMATED RELIABILITY OF

RATINGS FOR WARMTH

Source	Sum of Squares	Degrees of Freedom	Variance
From persons (Vp)	12.29	23	.534
From raters	.85	2	
From remainder (Ve)	6.43	46	.140
Total	19.57	71	

$$r_{kk} = \frac{V_p - V_e}{V_p}$$

$$r_{33} = \frac{.534 - .140}{.534}$$

$$r_{33} = .74^{1}$$

1. Ebel's coefficient of reliability for mean ratings of warmth from three raters

TABLE 3

ESTIMATED RELIABILITY OF

RATINGS FOR GENUINENESS

Source	Sum of Squares	Degrees of Freedom	Variance
From persons (Vp)	15.07	23	.655
From raters	.57	2	
From remainder (Ve)	5.68	46	.124
Total	21.32	71	

$$r_{kk} = \frac{V_p - V_e}{V_p}$$

$$r_{33} = \frac{.655 - .124}{.655}$$

$$r_{33} = .81^{1}$$

1. Ebel's coefficient of reliability for mean ratings of genuineness from three raters.

Ebel gives the formula: $r_{kk} = \frac{V_p - V_e}{V_p}$

where

r = reliability of ratings
V_p = variance for persons
V_e = variance for error
k = number of raters

(Ebel, 1951)

RESULTS: REPORTED AND DISCUSSED

The results related to the main purpose of this study are presented through the medium of tables and graphs. Table 4 provides an overview of the data derived from the ratings of subject's pre and post video tapes. Table 5 presents the test of the major research hypothesis. The Wilcoxon test for differences of combined mean ratings (accurate empathy, warmth, and genuineness) provided a T value of 7.5; significant at the .025 level for a one tailed test. The hypothesis under test was, therefore, rejected in favor of the alternative hypothesis. Focused video tape feedback does result in teachers obtaining higher combined mean ratings (accurate empathy, warmth, and genuineness).

The following three hypotheses were tested to find the source of the overall behavior change. The Wilcoxon test for differences of mean ratings for warmth provided a T value of 2, significant at the .025 level for a one tailed test (see Table 6). The third hypothesis was, therefore, rejected in favor of the alternative hypothesis. Focused video tape feedback does result in teachers obtaining higher mean ratings for warmth.

T values for differences in mean ratings for accurate empathy and genuineness were not statistically significant (see Tables 7 and 8). Therefore, hypotheses 2 and 4 failed to

Summarized Results of Hypotheses Under Test:

1. Combined mean ratings (accurate empathy, warmth, and genuineness):

   $Ho_1: \bar{X}_1 = \bar{X}_2$ rejected in favor of $H_1: \bar{x}_1 < \bar{x}_2$

2. Accurate empathy:

   $Ho_2: \bar{x}_1 = \bar{x}_2$ failed to be rejected

3. Warmth:

   $Ho_3: \bar{x}_1 = \bar{x}_2$ rejected in favor of $H_1: \bar{x}_1 < \bar{x}_2$

4. Genuineness:

   $Ho_4: \bar{x}_1 = \bar{x}_2$ failed to be rejected

Context

A closer examination of the data (Table 4) revealed some surprising findings with reference to context. First, it was expected (although not hypothesized) that the subjects doing interviews would probably rate higher on accurate empathy, warmth, and genuineness than subjects working with small groups or with the entire class. Similarly subjects working with small groups would likely rate higher than subjects working with the entire class. The Kruskal-Wallis H test (a one-way analysis of variance by ranks; Siegal, 1956) was used to test these commonly held expectations. The results (see Tables 9 and 10) indicate that the ratings for accurate empathy, warmth, and genuineness (spearately or combined) are not significantly different, in different contexts. We may conclude that teachers working with smaller numbers of students are not necessarily providing higher levels of facilitative behaviors.

TABLE 4

CONTEXT, GRADE LEVEL, MEAN RATINGS AND DIFFERENCES FOR EACH SUBJECT

CONTEXT	INTERVIEW	INTERVIEW	SMALL GRP. READING	SMALL GRP READING	WHOLE CLASS READING	WHOLE CLASS READING	SMALL GRP READING	WHOLE CLASS LANG ARTS	WHOLE CLASS READING	WHOLE CLASS DISCUSSION	WHOLE CLASS READING
LEVEL	JR. HI.	JR. HI.	INTER.	INTER.	PRIM.	PRIM.	PRIM.	INTER.	INTER.	INTER.	INTER.
SUBJECT	1	2	3	4	5	6	7	8	9	10	11.
$\bar{x}$ Pre - Post	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
Accurate Empathy $\bar{x}$ Ratings for 3 raters $\bar{x}$	2.6 2.4	2.4 2.3	2.2 2.1	1.8 2.4	2.0 2.0	2.1 2.1	2.0 2.6	2.3 2.6	1.5 1.7	2.4 3.3	1.8 2.0
d	-.2	-.1	-.1	+.6	0	0	+.6	+.3	+.2	+.9	+.2
Warmth $\bar{x}$	3.4 3.4	2.9 3.1	3.1 3.1	2.7 3.3	3.1 2.9	3.0 3.4	3.0 3.4	3.4 3.6	1.9 2.8	3.3 3.7	3.2 3.2
d	0	+.2	0	+.6	-.2	+.4	+.4	+.2	+.9	+.4	0
Genuineness $\bar{x}$	3.8 3.8	3.1 3.6	3.5 3.7	3.6 3.6	3.8 3.4	3.6 3.9	3.7 4.1	4.0 3.8	2.2 3.1	3.7 4.2	3.5 3.7
d	0	+.5	+.2	0	-.4	+.3	+.4	-.2	+.9	+.5	+.2
Σ d	-.2	+.6	+.1	+1.2	-.6	+.7	+1.4	+.3	+2.0	+1.8	+.4

TABLE 5

WILCOXON MATCHED-PAIRS SIGNED-RANKS
TEST FOR DIFFERENCES OF
COMBINED MEAN RATINGS

Subject	A,E d	Warmth d	Gen. d	Total d	Rank of d	Rank with less frequent sign
1	-.2	0	0	-.2	-2	2
2	-.1	+.2	+.5	+.6	5.5	
3	-.1	0	+.2	+.1	1	
4	+.6	+.6	0	+1.2	8	
5	0	-.2	-.4	-.6	-5.5	5.5
6	0	+.4	+.3	+.7	7	
7	+.6	+.4	+.4	+1.4	9	
8	+.3	+.2	-.2	+.3	3	
9	+.2	+.9	+.9	+2.0	11	
10	+.9	+.4	+.5	+1.8	10	
11	+.2	0	+.2	+.4	4	
Σd	+2.3	+1.8	+1.2	+5.3	N=11	T=7.5*

* Significant at the .025 level one tailed

TABLE 6

WILCOXON MATCHED-PAIRS SIGNED-RANKS
TEST FOR DIFFERENCES OF
MEAN RATINGS FOR WARMTH

Subject	Pre-tape $\bar{X}$ rating	Post tape $\bar{X}$ rating	d	Rank of d	Rank with less frequent sign
1	3.4	3.4	0		
2	2.9	3.1	+0.2	2	
3	3.1	3.1	0		
4	2.7	3.3	+0.6	7	
5	3.1	2.9	-0.2	-2	2
6	3.0	3.4	+0.4	5	
7	3.0	3.4	+0.4	5	
8	3.4	3.6	+0.2	2	
9	1.9	2.8	+0.9	8	
10	3.3	3.7	+0.4	5	
11	3.2	3.2	0		
				N=8	T=2*

* Significant at the .025 level one tailed

TABLE 7

WILCOXON MATCHED-PAIRS SIGNED-RANKS
TEST FOR DIFFERENCES OF
MEAN RATINGS FOR ACCURATE EMPATHY

Subject	Pre-tape $\bar{x}$ rating	Post-tape $\bar{x}$ rating	d	Rank of d	Rank with less frequent sign
1	2.6	2.4	-0.2	-4	4
2	2.4	2.3	-0.1	-1.5	1.5
3	2.2	2.1	-0.1	-1.5	1.5
4	1.8	2.4	+0.6	7.5	
5	2.0	2.0	0		
6	2.1	2.1	0		
7	2.0	2.6	+0.6	7.5	
8	2.3	2.6	+0.3	6	
9	1.5	1.7	+0.2	4	
10	2.4	3.3	+0.9	9	
11	1.8	2.0	+0.2	4	
				N=9	T=7

α = .032 (N.S)

TABLE 8

WILCOXON MATCHED-PAIRS SIGNED-RANKS
TEST FOR DIFFERENCES OF
MEAN RATINGS FOR GENUINENESS

Subject	Pre-tape $\bar{x}$ rating	Post-tape $\bar{x}$ rating	d	Rank of d	Rank with less frequent sign
1	3.8	3.8	0		
2	3.1	3.6	+0.5	7.5	
3	3.5	3.7	+0.2	2	
4	3.6	3.6	0		
5	3.8	3.4	-0.4	-5.5	5.5
6	3.6	3.9	+0.3	4	
7	3.7	4.1	+0.4	5.5	
8	4.0	3.8	-0.2	-2	2
9	2.2	3.1	+0.9	9	
10	3.7	4.2	+0.5	5.5	
11	3.5	3.7	+0.2	2	
				N=9	T=7.5

α = .036 (N.S)

TABLE 9

RATINGS FOR SUBJECTS ACCORDING TO CONTEXT

Inter-personal Skills	No.	CONTEXT		
		Interview (one student)	Small Grp (6-10 students)	Whole class (approx. 30 students)
Accurate Empathy	11	2.50 2.35	2.15 2.10 2.30	2.00 2.10 2.45 1.60 2.85 1.90
Warmth	11	3.40 3.00	3.10 3.00 3.20	3.00 3.20 3.50 2.45 3.50 3.20
Genuine-ness	11	3.80 3.35	3.60 3.60 3.90	3.60 3.75 3.90 2.65 3.95 3.60
Combined (A.E., W., and G.)	11	3.25 2.91	2.95 2.90 3.15	2.87 3.01 3.27 2.25 3.43 2.90

TABLE 10

SUMMARY OF KRUSKAL-WALLIS H TEST:

Source	df	Interview, Small Grp, Whole Class	
		H value	
Accurate Empathy	2	1.6[a]	N.S.
Warmth	2	.7[b]	N.S.
Genuineness	2	.2[c]	N.S.
Combined	2	.2[d]	N.S.

a α = .50

b α = .80

c α = .95

d α = .95

Secondly, it was also anticipated that individual subjects would rate differently when functioning in different contexts. They were, therefore, asked to use the same context for pre and post tapes. Two of the subjects did not, and, therefore, were eliminated from analysis. Three others used different contexts for taping and coding during the treatment period (tapes 2 and 3). Examination of the self coding scores of these subjects indicated that their self coding scores seemed to vary more than the scores of other subjects who maintained the same context throughout the treatment period. Three of the four subjects who showed the greatest gains used the same context for each treatment taping. This would suggest that behavior change tends to be context-specific.

The Training Manual

An attempt was made to develop a limited category coding system (the training manual) for easy use by classroom teachers. Submissions from subjects and raters provided data pertinent to program evaluation. Several comments can be made concerning the development, effectiveness, and reliability of the system.

First, the examples of dialogue intended to assist the user in learning to discriminate the category levels, were thought to be "inappropriate," "not helpful in learning to discriminate levels," and "irrelevant to teaching."

Secondly, several changes were made in the coding categories (see Figure 4). (These changes were made following the treatment period and prior to the rating of the pre and post tapes.) The term "warmth" was used

OVERALL CHANGES
A BRIEF OUTLINE OF THE LEVELS OF ACCURATE EMPATHY, WARMTH AND GENUINENESS

FIGURE 4

LEVEL	ACCURATE EMPATHY	WARMTH	GENUINENESS
1.	Completely unaware of student's meaning, feeling experiences and interests	Explicit evidence of rejection	Explicit evidence of defensiveness and phoniness
2.	Aware of only <u>obvious</u> meanings and feelings Aware but response is tangential	- Responses are mechanical and passive - Ignores the student	- Uninvolved - Intellectualizing - Responses seem contrived or rehearsed - An air of professional facade prevails
3.	Aware of obvious meanings and feelings and <u>sometimes of less obvious</u>. Response reflects or communicates this awareness	No explicit or implicit evidence of dislike or rejection but no clear expression of warmth either (interest but not warmth)	Defensive or phony implicit evidence only.
4.	Responses indicate awareness of obvious and less obvious meanings and feelings - Tentative Probing - Guessing at less obvious meanings and feelings	Explicit evidence of warmth and concern - by praise and encouragement	- No explicit or implicit evidence of any defensiveness or phoniness
5.	- Responses indicate awareness of many less obvious meanings and feelings - Responses focus on personally relevant material - Tentative probing <u>more accurate</u>	Caring, prizing and valuing of the student is made explicit by voice and manner - Evidence of a close relationship	- Responses are free, spontaneous and honest - Being self without any doubt - Functional effect of Genuineness is TRUST

instead of "respect." It seemed that in defining and explaining the various levels of respect to the subjects, the experimenter was doing so in terms of "warmth." During the practice coding session and throughout the treatment period it became obvious that the warmth and genuineness scales needed another level. Subjects found that many of their responses did not fit either in level two of warmth or in level three, but somewhere in between. A similar "neutral" level was added to the genuineness scale. In effect, the nominal coding categories were not used for analysis of the tapes. Scales very similar to the Truax scales for teachers were used.

Thirdly, the manual served as an effective introduction to the program. For example, one teacher having read the manual said, "as I read I found myself saying guilty, guilty, guilty," Participants did identify quickly what it was they were being asked to do. But beyond that, the manual's efficacy remains doubtful. In evaluating the component parts of the program subjects reported that the coding manual "wouldn't stand alone"; that it was useful only "after the coding session"; that it was not helpful in learning how to discriminate. Only one subject reported that it was "very explicit."

Program Evaluation by Subjects

Perhaps the most interesting results are those reported by the participants. The reaction to the program was generally favorable. Two negative reactions were reported consistently. One was the awkwardness of using the equipment. The second was the time involved in having to code the

tapes. In reporting the effects of having participated in the program one teacher noted that students approached her who had not done so previously. Others reported a discrepancy between their "actual" and their "ideal" behavior: "I show less warmth than I feel for the kids," "I didn't realize I was so serious," "I don't project on tape the true effect of my feelings." I appear a very cold person" and "I talk too much - am pedantic - feel looser than I appear." There were also reports suggesting the program may have had more generalized effects: "My son told me I didn't listen to him. Now I think he was right. I am listening now"; "It has made me aware of others' feelings not only in teaching but with other teachers"; "I see myself differently now; too many situations are too teacher centered"; and for some the program provided "stimulating chats with video involved staff."

Conclusions

> All who drink this remedy recover in a short time, except for those whom it does not help.....it is obvious that it fails only in incurable cases.
>
> (Galen, as quoted in Truax and Carkhuff, 1967)

There is evidence to support the Rogerian hypothesis that certain interpersonal skills are central to effective interpersonal processes. C.B. Truax and others have developed instruments useful for the measurement and training of accurate empathy, warmth, and genuineness. Structured feedback using using video tape has proven to be an effective way to change certain facilitative behaviors of teachers. More specifically it has proven to be an effective way to change the level of warmth offered by teachers. Given a longer training

period, and a refined training manual, there is reason to believe that even more dramatic changes will be effected by the program developed and tested in this study.

The relatively high inter-rater reliability obtained with minimal training, the apparent "success" in teachers learning to discriminate levels of accurate empathy, warmth, and genuineness, suggest that the program needs someone who will initially "sell" teachers on its value; will provide "teaching" in the use of the training manual; and will foster the relationship necessary to provide participants with additional feedback. The attempt to develop a program which will "stand alone" or be completely "packageable" -- able to be sent by mail to someone who wished to try it and still affect behavior change, may be inappropriate.

> "One reason that the scientific method is difficult to apply to teaching and the improvement of teaching is that a simple statement of the steps involved ignores the subjective feelings, emotions, and attitudes which any investigation generates. The subjective elements of the process cannot be denied and to take them into consideration provides a more complete understanding."
>
> (Flanders, 1970)

Focused video feedback systems for professional development involve a certain amount of busy-work. Participants learn how to use equipment, how to discriminate, and how to code and calculate response profiles. Concurrently they are also experiencing new feelings about themselves as teachers; "It depressed me for a while"; or "I'm not as harsh as I thought I was." Promoters of programs which try to help bring about changes in

behavior must not retreat from facing the subjective elements of teachers studying their own behavior and then trying to change (Flanders, 1970).

Recommendations for Further Study

The results reported in this study warrant further investigation of a number of questions. Studies relating teacher accurate empathy, warmth, and genuineness to pupil outcome measures are necessary. If such correlational studies revealed that these skills are clearly related to pupil achievement, additional studies using inferential designs would be necessary to investigate the effects of teacher behaviors on pupil achievement.

Investigations testing the treatment effects of the specific elements of factors in the program developed would be appropriate. This would amount to a replication of the Birch study (1969) using the training manual under study rather than the GSA coding schedules. It is also recommended that the use of video taped role models be added as a treatme nt element.

Finally, the question of length of treatment necessary to effect behavior change and the extent to which changed behavior endures needs to be answered.

BIBLIOGRAPHY

Amidon, Edmond J. and Elizabeth Hunter. Improving Teaching: The Analysis of Classroom Verbal Interaction. New York: Holt, Rinehart and Winston, Inc., 1966

Aspy, David N., "The Differential Effects of High and Low Functioning Teachers upon Student Achievement." Unpublished manuscript, University of Florida, 1967; abstracted in Carkhuff, R., and B. Berenson, Beyond Counseling and Therapy, Holt, Rinehard and Winston, Inc., New York, 1967.

Aspy, David N., and William Hadlock, "The Effects of High and Low Functioning Teachers upon Student Performance, Unpublished manuscript, University of Florida, 1966; abstracted in Carkhuff, R., and B. Berenson, Beyond Counseling and Therapy, Holt, Rinehart and Winston, Inc., New York, 1967.

Birch, Daniel R. "Effects of Inquiry Orientation and Guided Self-Analysis Using Video tape on the Verbal Teaching Behavior of Intermediate Grade Student Teachers." Unpublished doctoral dissertation, University of California, Berkeley, 1969.

Carkhuff, Robert R. Helping and Human Relations: Vol. I Selection and Training, New York: Holt, Rinehart and Winston, Inc., 1969.

Carkhuff, Robert R. Helping and Human Relations: Vol. II Practice and Research. New York: Holt, Rinehart and Winston, Inc., 1969.

Carkhuff, Robert R. and Bernard G. Berenson. Beyond Counseling and Therapy. New York: Holt, Rinehart and Winston, Inc., 1967.

Chinsky, Jack M. and Julian Rappaport. "Brief Critique of the Meaning and Reliability of 'Accurate Empathy' Ratings," Psychological Bulletin, 1970, 73 (5), 379-382.

Christiansen, C.M. "Relationships Between Pupil Achievement, Pupil Affect-Need, Teacher Warmth, and Teacher Permissiveness," Journal of Educational Pshychology, 1960 51 (3) 169-174.

Ebel, Robert, L. "Estimation of the Reliability of Ratings," Psychometrika, 1951, 16 (4), 407-424.

Flander, Ned A. Analyzing Teaching Behavior, Reading, Massachusetts: Addison-Wesley Publishing Co., 1970.

Parsons, Theodore W. Guided Self-Analysis System for Professional Development, Education Series (Schedules A, B, C and D) Berkeley: GSA/T.W. Parsons, 1968.

Rappaport, Julian and Jack M. Chinsky, "Accurate Empathy: Confusion of a Contstruct," Psychological Bulletin, 1972, 77 (6), 400-404.

Rosenshine, Barak. "Teaching Behaviors Related to Pupil Achievement: A Review of Research," Research into Classroom Processes, ed. Ian Westbury and Arno A. Bellack. New York: Teachers College Press, 1971.

Stolurow, L. and K. Pahel, "Letters to the Editors," Harvard Educational Review, Summer, 1963.

Tardiff, Robert F. "Modification of the Verbal Behavior of Teachers: Its Impact on the Verbal Behavior of Pupils." Paper read at the American Educational Reasearch Association, Chicago, 1972.

Truax, Charles B. "The Meaning of Reliability of Accurate Empathy Ratings: A Rejoiner, " Psychological Bulletin, 1972 (a), 77 (6), 397-399

Truax, Charles B. and Robert R, Carkhuff. Toward Effective Counseling and Psychotherapy: Training and Practice. Chicago: Aldine Publishing Co., 1967.

Truax, Charles B. and Kevin M. Mitchell. "Research on Certain Therapist Interpersonal Skills in Relation to Process and Outcome, " Handbook of Psychotherapy and Behavior Change: An Empirical Analysis, eds. A.E. Bergin and S.L. Garfield. New York: Wiley, 1971.

Truax, Charles B., and Carl D. Tatum. "An Extension from the Effective Psychotherapeutic Model to Constructive Personality Change in Preschool Children," Childhood Education, 1966, 42, 456-462.

Ulrich, Roger, Thomas Stachnik and John Mabry. Control of Human Behavior, Vol. I, Glenview, Illinois: Scott, Foresman, 1966